

FIG.7

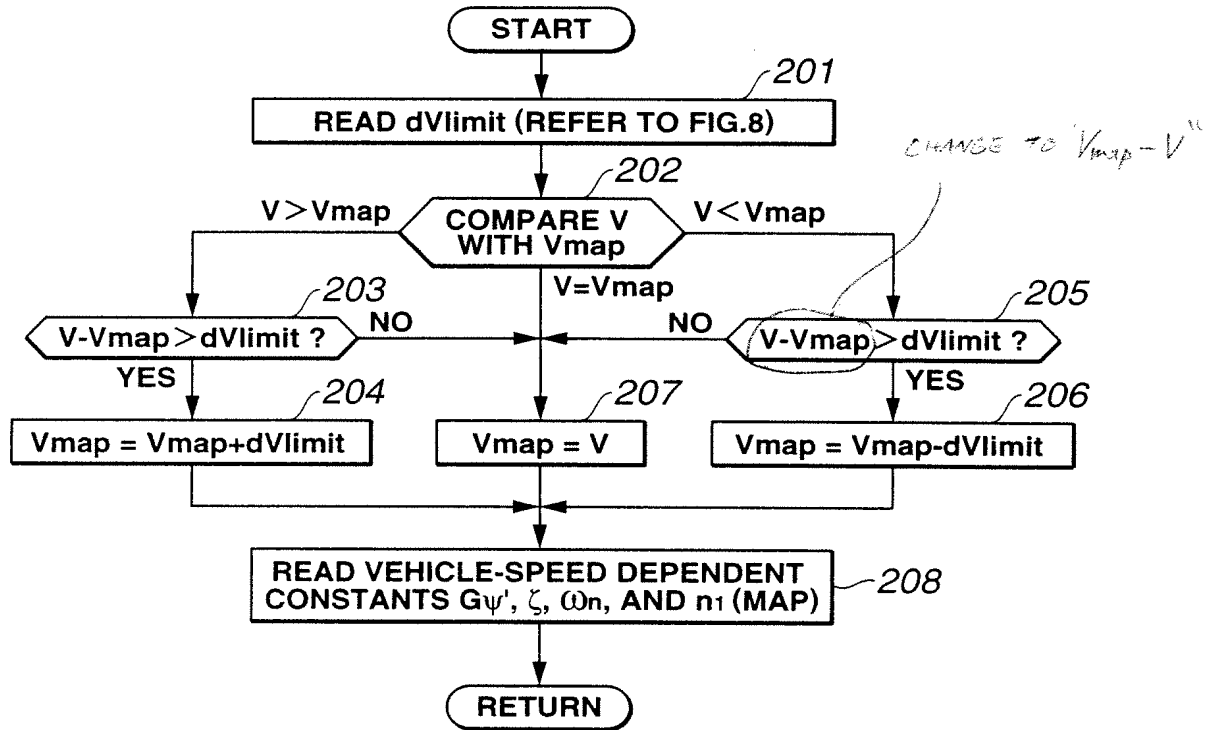
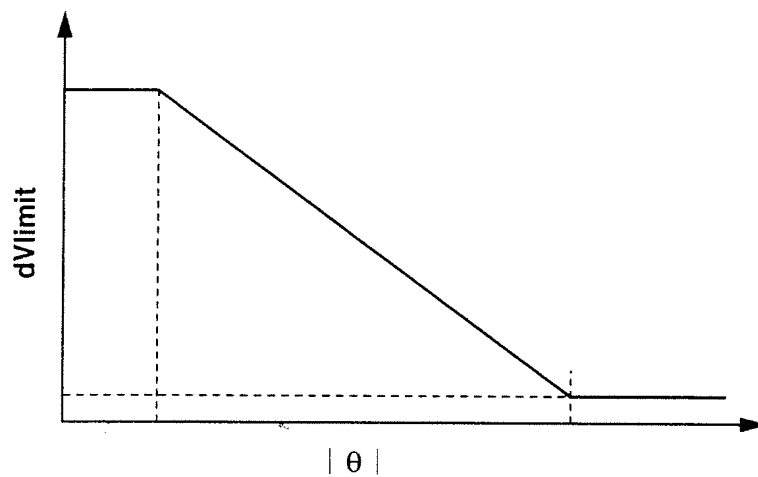
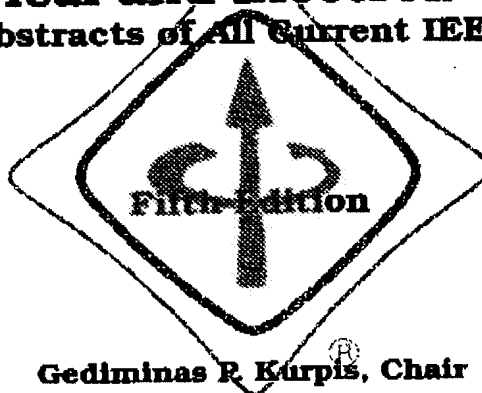


FIG.8



IEEE Std 100-1992

**The New IEEE Standard Dictionary
of Electrical and Electronics Terms**
[Including Abstracts of All Current IEEE Standards]



Gediminas P. Kurpis, Chair

Christopher J. Moore, Editor

IEEE

716

Limiter

geometric
812-1984

A device to
exciting a
photoelectric
(60)

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1962w. (13)

limited
proportionality.
region of.
See: region
of limited proportionality.

limited signal (radar). A signal that is limited in
amplitude by the dynamic range of the system.
686-1982. (42)

limited stability. A property of a system
characterized by stability when the input
signal falls within a particular range and by
instability when the signal falls outside this
range. 154-1963w

limiter (1) (excitation systems for synchro-
nous machines). An element of the excitation
system which acts to limit a variable by mod-
ifying or replacing the functions of the primary
detector element when predetermined condi-
tions have been reached. Notes: Examples: (A)
An under excitation limiter prevents the volt-
age regulator from lowering the excitation of
the synchronous machine below a prescribed
level. (B) An over excitation limiter prevents the
voltage regulator from raising the excitation of
the synchronous machine above a level that
would cause a thermal overload in the machine
field; refer to ANSI C50.13-1977. (C) A volts per
hertz limiter acts, through the voltage regula-
tor to correct for a machine terminal voltage to
frequency ratio that is considered abnormal.
(D) Other types of limiters may be used to con-
trol various quantities, such as, rotor angle,
excitation output, etc. See: ferri-diode limiter;
ferrite limiter; gyromagnetic limiter; multi-
plier limiter; passive limiter; p-n diode
limiter; plasma limiter; quasioactive limiter.
421.1-1986

limiter (2) (data transmission). (1) A device in which
some characteristic of the output is automati-
cally prevented from exceeding a predeter-
mined value. (2) More specifically, a transducer
in which the output amplitude is substantially
linear with regard to the input up to a prede-

termined value and substantially constant
thereafter. Note: For waves having both positive
and negative values, the predetermined value
is usually independent of sign. 599-1985w
(3) (rotating machinery). An element or group
of elements that acts to limit by modifying or
replacing the functioning of a regulator when
predetermined conditions have been reached.
Note: Examples are minimum excitation lim-
iter, maximum excitation limiter, maximum
armature-current limiter. 191

(4) (radio receivers). A transducer whose out-
put is constant for all inputs above a critical
value. Note: A limiter may be used to remove
amplitude modulation while transmitting angle
modulation. See: radio receiver; transducer.
145-1983

(5) (excitation systems). A feedback element
of the excitation system that acts to limit a
variable by modifying or replacing the function
of the primary detector element when predeter-
mined conditions have been reached. 421-1972

limiter circuits (analog computers). A circuit of
nonlinear elements that restrict the electrical
excursion of a variable in accordance with
some specified criteria. "Hard limiting" is a
limiting action with negligible variation in
output in the range where the output is
limited. "Soft limiting" is a limiting action with
appreciable variation in output in the range
where the output is limited. A "bridge limiter"
is a bridge circuit used as a limiter circuit. In
an analog computer, a "feedback limiter" is a
limiter circuit usually employing biased diodes
shunting the feedback component of an
operational amplifier; an "input limiter" is a
limiter circuit usually employing biased diodes
in the amplifier input channel that operates by
limiting the current entering the summing
junction. "Linear system or element"—a system
with the properties: if y_1 is the response to x_1
and y_2 is the response to x_2 , then (i) $y_1 + y_2$ is the
response to $(x_1 + x_2)$ and (ii) ky_1 is the
response to kx_1 . See: stop. 65-1977

limiting (automatic control). The intentional
imposition or inherent existence of a boundary
on the range of a variable, for example, on the
speed of a motor. 421-1972. (3)

limiting ambient temperature (1) (electric
equipment) (thermal classification of elec-
tric equipment and electrical insulation).
The highest (or lowest) ambient temperature at
which electric equipment is expected to give
specified performance under specified condi-
tions, for example, rated load. 1-1986

(2) (equipment rating). An upper or lower
limit of a range of ambient temperatures within
which equipment is suitable for operation at its
rating. Where the term is used without an
adjective the upper limit is meant. See: limit-
ing insulation system temperature. (83)

limiting angular subtense (α_{lim}) (laser-maser).
The apparent visual angle which divides intra-

beam view

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exposure

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